

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A water softening device, comprising:
 - at least a first water softener and a second water softener, each of the first and second water softeners having a sample conduit in fluid communication therewith for collecting a sample of treated water;
 - at least one regeneration chamber for conducting regeneration of each of said water softeners;
 - a hardness detection device for detecting the hardness of treated water from each of said water softeners, the hardness detection device being in fluid communication with the sample conduits associated with the first and second water softeners such that the sample of treated water can be withdrawn from one of the first and second water softeners and delivered to the hardness detection device;
 - a control device for controlling the flow of raw water to each of said water softeners and for controlling regeneration of each of said water softeners;
 - said control device controlling the flow of raw water and regeneration of each of said water softeners based on the difference between a previous measurement value and a current measurement value from the hardness detection device.
2. (Previously Presented) The water softening device of Claim 1, further comprising:
 - a sampling mechanism that samples treated water from inside a resin layer of each of said water softeners;wherein said hardness detection device detects the hardness of treated water sampled by said sampling mechanism.

3. (Previously Presented) The water softening device of Claim 1, further comprising:

a non-regenerating polisher downstream of said water softeners with respect to the flow of raw water through said water softening device.
4. (Previously Presented) The water softening device of Claim 2, further comprising:

a non-regenerating polisher downstream of said water softeners with respect to the flow of raw water through said water softening device.
5. (Previously Presented) The water softening device of Claim 1, wherein:

said water softeners are placed in a parallel arrangement with respect to the water flow.
6. (Previously Presented) The water softening device of Claim 5, wherein:

water flows alternately through said first water softener and said second water softener; and

said control device performs regeneration of one of said first water softener and said second water softener when the other of said first water softener and said second water softener has water flow therethrough.
7. (Previously Presented) The water softening device of Claim 1, wherein:

said at least one regeneration chamber is common to said first water softener and said second water softener.
8. (Currently Amended) A water softening method, the method comprising:

providing at least a first water softener and a second

respect to the flow of raw water through said water softeners with a non-regenerating polisher.

11. (Previously Presented) The water softening method of Claim 9, further comprising:

treating water downstream of said water softeners with respect to flow of raw water through said water softeners with a non-regenerating polisher.

12. (Previously Presented) The water softening method of Claim 8, wherein:

said water softeners are placed in a parallel arrangement with respect to raw water flow.

13. (Previously Presented) The water softening method of Claim 12, wherein:

water flows alternately through said water softeners;

and

said control device performs regeneration of one water softener when the other water softener has water flow therethrough.

14. (Previously Presented) The water softening method of Claim 8, wherein:

said at least one regeneration chamber is common to said first water softener and said second water softener.

15. (Currently Amended) A water softening device, comprising:

at least a first water softener and a second water softener placed in a parallel arrangement with respect to raw water flow, each of the first and second water softeners having a sample conduit in fluid communication therewith for collecting a sample of treated water;

at least one regeneration chamber for conducting regeneration of each of said water softeners;

a hardness detection device for detecting hardness of treated water of said water softeners, the hardness detection device being in fluid communication with the sample conduits associated with the first and second water softeners such that the sample of treated water can be withdrawn from one of the first and second water softeners and delivered to the hardness detection device; and

a control device for controlling the flow of raw water to each of said water softeners and for controlling regeneration of each of said water softeners;

wherein water flows alternately through said water softener and said second water softener;

wherein said control device performs regeneration of one water softener when the other water softener has water flow therethrough; and

wherein said control device switches water flow from one water softener to the other when the difference between a previous measurement value and a current measurement value from the hardness detection device exceeds a predetermined value.

16. (Previously Presented) The water softening device of Claim 15, wherein:

said at least one regeneration chamber is common to said first water softener and said second water softener.

17. (Previously Presented) The water softening device of Claim 15, further comprising:

a sampling mechanism that samples treated water from inside a resin layer of each of said water softeners;

wherein said hardness detection device detects the hardness of treated water sampled by said sampling mechanism.

18. (Previously Presented) The water softening device of Claim 15, further comprising:
 - a non-regenerating polisher downstream of said water softeners with respect to the flow of raw water through said water softening device.
19. (Previously Presented) The water softening device of Claim 17, further comprising:
 - a non-regenerating polisher downstream of said water softeners with respect to the flow of raw water through said water softening device.
20. (Previously Presented) The water softening device of Claim 3, wherein said non-regenerating polisher contains a Na⁺ type ion exchange resin.
21. (Previously Presented) The water softening device of Claim 4, wherein said non-regenerating polisher contains a Na⁺ type ion exchange resin.
22. (Previously Presented) The water softening method of Claim 10, wherein said non-regenerating polisher contains a Na⁺ type ion exchange resin.
23. (Previously Presented) The water softening method of Claim 11, wherein said non-regenerating polisher contains a Na⁺ type ion exchange resin.
24. (New) A water softening device as described in Claim 1, wherein the hardness detection device includes:
 - a chamber for collecting the sample of treated water via the sample conduit;
 - a hardness component measuring device in fluid communication with the chamber via a connector conduit; and
 - a pump associated with the connector conduit for delivering the sample

of treated water to the measuring device at a constant pressure and constant flow.

25. (New) A water softening device as described in Claim 24, further including:

means for maintaining the sample of treated water at a constant temperature.

26. (New) A water softening device as described in Claim 25, wherein the means comprises a heat exchanger associated with the connector conduit and disposed upstream of the measuring device.

27. (New) The water softening method of Claim 8, further including the steps of:

directing the sample of treated water through the sample conduit to a chamber for collection thereof;

linking the chamber to a hardness component device via a connector conduit; and

providing a pump that is associated with the connector conduit for delivering the sample of treated water to the measuring device at a constant pressure and constant flow.

28. (New) The water softening method of Claim 27, further including the step of:

maintaining the sample of treated water at a constant temperature.

29. (New) The water softening method of Claim 28, wherein the step of maintaining the sample of treated water at a constant temperature comprises the step of:

disposing a heat exchanger along the connector conduit upstream of

the measuring device and operating the heat exchanger so as to maintain the constant temperature.